

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

An abstract has been added on a separate sheet at the end of this Amendment. Thus, it is respectfully submitted that the objection to the specification at page 2, item 1 of the Office Action should be withdrawn.

The specification has been amended to include section headings. Thus, it is respectfully submitted that the objection to the specification at page 2, item 2 should be withdrawn.

Claims 1-3 and 6-12 have been amended to overcome the objections to the claims and the 35 U.S.C. §112, second paragraph, rejections, to remove the recited reference characters, and to place all elements in non-means-plus-function format. Accordingly, it is respectfully submitted that the claim objections and claim rejections under 35 U.S.C. 112, second paragraph, should be withdrawn for at least these reasons.

The Office Action at page 5, item 20, objects to claims 4, 5, and 7-10 as being dependent upon a rejected base claim, but noted that these claims would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. New claim 13 has been added which incorporates the features of previous claims 1 and 4, and new claim 14 has been added which incorporates the features of previous claims 1 and 5. Claims 4 and 5 have been canceled. Accordingly, it is respectfully submitted that new claims 13 and 14 are patentable for the same reasons that claims 4 and 5 were previously deemed patentable.

The Office Action at page 5, item 19, rejects claims 1-3, 6 and 11 under 35 U.S.C. §102(b) as being anticipated by Meholic (2002/0139106). To the extent that this rejection may

be applied to the amended and new claims herein, the Applicant respectfully traverses based on the points set forth below.

By way of review, Meholic describes a pulsed detonation engine 10 supplied cyclically with a combustible charge conveyed into the combustion chamber 14 of a tube 12 having a valve rotor 34 by a supply device. FIG. 1; col. 2, l. 56-col. 3, l. 19. The valve rotor 34 of the tube 12 is mounted so that it can rotate with respect to the tube 12 so as to be able to occupy two positions, a first position corresponding to the phase of detonation of the combustible charge in the combustion chamber 14 of said tube 12 and a second position corresponding to the phase of supply of the combustible charge to said combustible chamber 14. Col. 4, ll. 22-45. In the side wall of said tube 12 at least two ports 56 for said combustible charge are provided, these ports 56 being closed and separated from said combustion chamber 14 by said valve rotor 34 when the valve rotor 34 assumes the first position, and communicating with said combustion chamber 14 in a fluidic manner when said valve rotor 34 assumes the second position. FIGs. 2 and 3; col. 4, ll. 22-45.

Claim 1 of the instant application has been amended to recite the feature that "said transverse base of the flame tube is movable for reciprocating in translation inside said flame tube in order to be able to occupy two boundary positions." As explained above, Meholic does not teach or suggest at least this recited feature of claim 1. The valve rotor 34 in Meholic rotates inside the tube 12, whereas the transverse base recited by claim 1 is "movable for reciprocating in translation inside said flame tube." According to aspects of the present invention, the transverse base may be, for example, a piston, or alternatively, may be mounted on a piston

reciprocating in translation inside a flame tube. Accordingly, it is respectfully submitted that the rejection of claim 1 should be withdrawn for at least this reason.

Additionally, claim 1 recites the feature of "said transverse movable base is secured to said tube by a releasable locking unit." This locking of the transverse movable base in said first position increases the efficiency of the engine by preventing the precipitate opening of the combustion charge supply openings.

Meholic does not teach or suggest the feature of "said transverse movable base is secured to said tube by a releasable locking unit," as recited by claim 1. Page 5, item 19 of the Office Action, cites to reference numerals "54, 48, 46, and 52" of Meholic as features which read on the "releasable locking means" recited by claim 1. However, reference numerals 54, 48, 46, and 52 of Meholic identify rotary driving means, not releasable locking means. Reference numeral 54 corresponds to a "radial support bearing" (col. 3, l. 55), reference numeral 48 corresponds to an "internal axle" (col. 3, l. 52), reference numeral 46 corresponds to a "second meshing bevel gear" (col. 3, ll. 51-52), and reference numeral 52 corresponds to a "thrust bearing" (col. 3, ll. 53-54). None of these components, either alone or in combination, could reasonably be considered a "releasable locking unit" as recited by claim 1. Accordingly, the rejection of claim 1 should be withdrawn for at least this reason as well.

Claims 2-3 and 6-12 depend on claim 1. Accordingly, it is respectfully submitted that claims 2-3 and 6-12 are patentable for at least the same reasons that claim 1 is patentable.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

/James Edward Ledbetter/

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